

```

version: '3'
services:
  app:
    image: khalidtanveer/docker-push-app:v1.0.0
    build: .
    ports:
      - "8000:8000"
    env_file:
      - .env
    restart: unless-stopped
    healthcheck:
      test: ["CMD", "curl", "-f", "http://localhost:8000"]
      interval: 30s
      timeout: 10s
      retries: 3

```

ASUS@LAPTOP-0DTNG3AP MINGW64 ~/docker-push-assignment

```

$ docker push khalidtanveer/docker-push-app:v1.0.0
The push refers to repository [docker.io/khalidtanveer/docker-push-app]
93d6e992f231: Pushed
4da88cc36b35: Pushed
dd71de34ab5: Layer already exists
25ff2493641: Layer already exists
1e594c89ce5: Layer already exists
f18232174b9: Layer already exists
08db6f927de: Layer already exists
v1.0.0: digest: sha256:3addb45a50bb913181389888e3cbd68fbf61a13bf81a4bf9dc19863deec26db size: 856

```

ASUS@LAPTOP-0DTNG3AP MINGW64 ~/docker-push-assignment

hub.docker.com/repository/docker/khalidtanveer/docker-push-app/general

**khalidtanveer/docker-push-app**

Last pushed 1 minute ago · Repository size: 45.7 MB

Add a description

Add a category

**General** Tags Image Management BETA Collaborators Webhooks Settings

Tags	DOCKER SCOUT INACTIVE	Activate		
This repository contains 1 tag(s).				
Tag	OS	Type	Pulled	Pushed
v1.0.0		Image	less than 1 day	1 minute
latest		Image	less than 1 day	13 minutes

[See all](#)

**Docker commands**

To push a new tag to this repository:

```
docker push khalidtanveer/docker-push-a
pp:tagname
```

**buildcloud**

Build with Docker Build Cloud

Accelerate image build times with access to cloud-based builders and shared cache.

Docker Build Cloud executes builds on optimally-dimensioned cloud infrastructure with dedicated per-organization isolation.

Get faster builds through shared caching across your team, native multi-platform support, and encrypted data transfer.

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## 1. What specific changes or optimizations did you make to your Dockerfile or docker-compose.yml to prepare for deployment?

I optimized the Dockerfile by using `node:18-alpine` for smaller image size, added multi-stage builds, and switched to a non-root user for better security. I also added a `.dockerignore` file to avoid unnecessary files inside the image. In

`docker-compose.yml`, I introduced a restart policy and a healthcheck to ensure production resilience.

**2. What challenges did you face while pushing your image to Docker Hub or running it in a clean environment? How did you overcome them?**

One challenge was Docker rejecting uppercase repository names. I fixed this by renaming the repo in lowercase. Another issue was authentication when pushing; I solved it by generating and using a Docker Hub Personal Access Token instead of my password. Running in a clean environment taught me to prune old images and test with fresh pulls.

**3. Reflect on your learning so far: What part of Docker now feels intuitive to you, and what would you still like to explore or understand better?**

Building and running images locally, tagging, and pushing to Docker Hub feels intuitive now. I understand the flow from `Dockerfile` → `docker build` → `docker run` → `docker push`. I'd like to explore Docker networking, multi-container orchestration with Compose in more depth, and eventually Kubernetes for scaling.